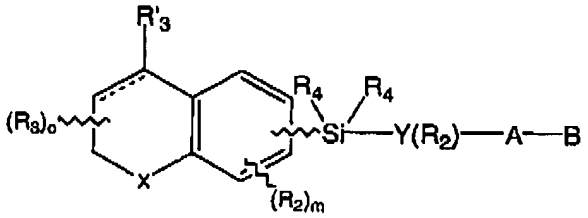
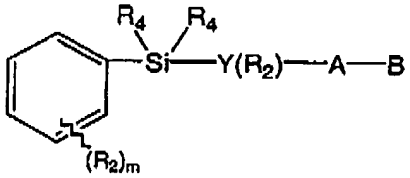
Docket 17303 (HL) PATENT

WHAT IS CLAIMED IS:

1. A compound selected from the group consisting of Formulas 1, 2, 3 and



formula (1)



formula (2)

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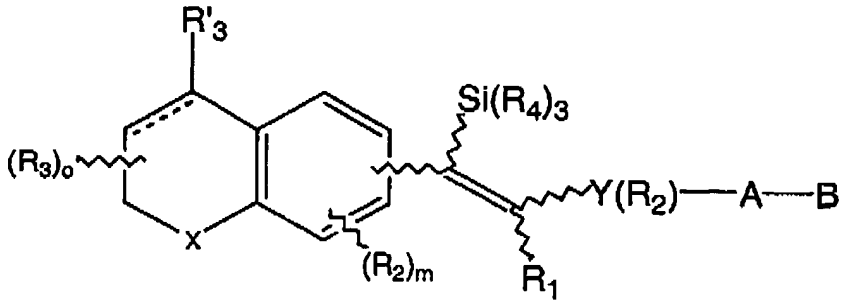
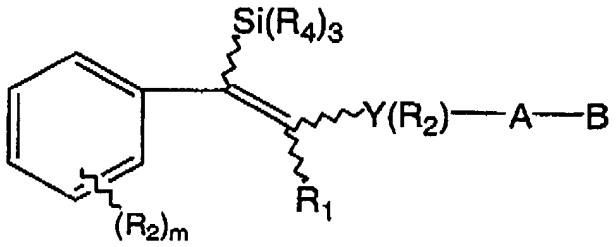
wherein the dashed line represents a bond or absence of a bond;



formula (3)



formula (4)

X is S, O, NR' where R' is H or alkyl of 1 to 6 carbons, or

X is $(C(R_1)_2)_n$ where R_1 is H or alkyl of 1 to 6 carbons, and n is an integer having the value of 0 or 1;

R_2 is hydrogen, lower alkyl of 1 to 6 carbons, F, Cl, Br, I, CF_3, fluoro substituted alkyl of 1 to 6 carbons, OH, SH, alkoxy of 1 to 12 carbons, or alkylthio of 1 to 12 carbons, benzyloxy or C_1 - C_{12} alkylbenzyloxy;

R_3 is hydrogen, lower alkyl of 1 to 6 carbons or F;

m is an integer having the value of 0 - 3;

o is an integer having the value of 0 - 4 when the dashed line represents absence of a bond, and 0 - 3 when the dashed line represents a bond;

R_3' is hydrogen, lower alkyl of 1 to 6 carbons, F or $(R_{15})_r$-phenyl, $(R_{15})_r$-naphthyl, or $(R_{15})_r$- heteroaryl where the heteroaryl group has 1 to 3 heteroatoms

selected from the group consisting of O, S and N, r is an integer having the values of 0 - 5;

R_4 is alkyl of 1 to 8 carbons, or phenyl;

Y is a phenyl or naphthyl group, or heteroaryl selected from a group consisting of pyridyl, thienyl, furyl, pyridazinyl, pyrimidinyl, pyrazinyl, thiazolyl, oxazolyl, imidazolyl and pyrrazolyl, said phenyl and heteroaryl groups being optionally substituted with one or two R_2 groups;

R_{15} is independently H, F, Cl, Br, I, NO_2, $N(R_8)_2$, $NH(R_8)$, COR_8, $NR_8CON(R_8)_2$, OH, $OCOR_8$, OR_8, CN, an alkyl group having 1 to 10 carbons, fluoro substituted alkyl group having 1 to 10 carbons, an alkenyl group having 1 to 10 carbons and 1 to 3 double bonds, alkynyl group having 1 to 10 carbons and 1 to 3 triple bonds, or a trialkylsilyl or trialkylsilyloxy group where the alkyl groups independently have 1 to 6 carbons;

A is $(CH_2)_q$ where q is 0-5, lower branched chain alkyl having 3-6 carbons, cycloalkyl having 3-6 carbons, alkenyl having 2-6 carbons and 1 or 2 double bonds, alkynyl having 2-6 carbons and 1 or 2 triple bonds;

B is hydrogen, COOH, NO_2, $P(O)(OH)_2$, $P(O)(OH)OR_8$, $P(O)(OR_8)_2$, SO_2OH, $SO_2(OR_8)$, $COOR_8$, $CONR_9R_{10}$, $-CH_2OH$, CH_2OR_{11}, CH_2OCOR_{11}, CHO, $CH(OR_{12})_2$, $CHOR_{13}O$, $-COR_7$, $CR_7(OR_{12})_2$, $CR_7OR_{13}O$, or tri-lower alkylsilyl, where R_7 is an alkyl, cycloalkyl or alkenyl group containing 1 to 5 carbons, R_8 is an alkyl group of 1 to 10 carbons or trimethylsilylalkyl where the alkyl group has 1 to 10 carbons, or a cycloalkyl group of 5 to 10 carbons, or R_8 is phenyl or lower alkylphenyl, R_9 and R_{10} independently are hydrogen, an alkyl group of 1 to 10 carbons, or a cycloalkyl group of 5-10 carbons, or phenyl or lower alkylphenyl, R_{11} is lower alkyl, phenyl or lower alkylphenyl, R_{12} is lower alkyl, and R_{13} is divalent alkyl radical of 2-5 carbons, or a pharmaceutically acceptable salt of said compound.

2. A compound in accordance with Claim 1 where **X** is $(C(R_1)_2)_n$ and **n** is 1.

3. A compound in accordance with Claim 1 where X is S.

4. A compound in accordance with Claim 1 where X is O.

5. A compound in accordance with Claim 1 where X is NR=.

6. A compound in accordance with Claim 1 where Y is phenyl.

7. A compound in accordance with Claim 1 where Y is thienyl.

8. A compound in accordance with Claim 1 having a structure selected from formulas (1) and (2).

9. A compound in accordance with Claim 8 having a structure of formula (1) where the dashed line represents absence of a bond.

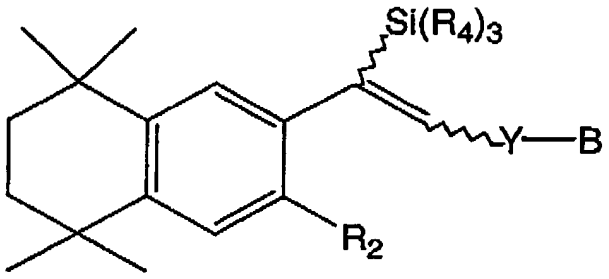
10. A compound in accordance with Claim 8 having a structure of formula (1) where the dashed line represents a bond.

11. A compound in accordance with Claim 1 having a structure selected from formulas (3) and (4).

12. A compound in accordance with Claim 11 having a structure of formula (3) where the dashed line represents absence of a bond.

13. A compound in accordance with Claim 11 having a structure of formula (3) where the dashed line represents a bond.

14. A compound of the formula



where R_2 is H or methyl, R_4 is lower alkyl of 1 to 8 carbons, Y is phenyl or thienyl and B is CH_2OH, or $COOR_8$ where R_8 is H or ethyl.

15. A compound in accordance with Claim 14 where R_4 is methyl.

16. A compound in accordance with Claim 15 where **Y** is phenyl.

17. A compound in accordance with Claim 16 where R_2 is H.

18. A compound in accordance with Claim 17 where **B** is CH_2OH.

19. A compound in accordance with Claim 17 where **B** is $COOR_8$.

20. A compound in accordance with Claim 16 where R_2 is CH_3.

21. A compound in accordance with Claim 20 where **B** is CH_2OH.

22. A compound in accordance with Claim 20 where **B** is $COOR_8$.

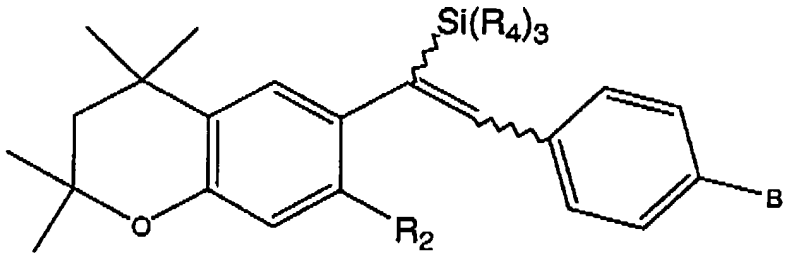
23. A compound in accordance with Claim 15 where Y is thienyl.

24. A compound in accordance with Claim 23 where R_2 is H.

25. A compound in accordance with Claim 24 where **B** is CH_2OH.

26. A compound in accordance with Claim 24 where **B** is $COOR_8$.

27. A compound of the formula



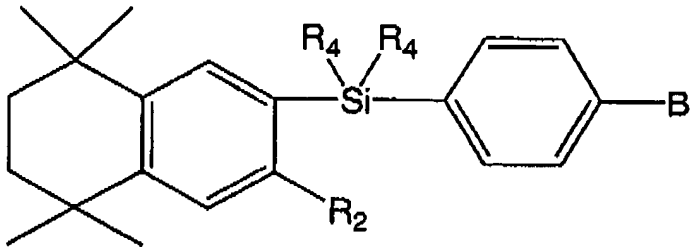
where R_2 is H or methyl, R_4 is lower alkyl of 1 to 8 carbons and **B** is CH_2OH, or $COOR_8$ where R_8 is H or ethyl.

28. A compound in accordance with Claim 27 where R_2 is H.

29. A compound in accordance with Claim 28 where **B** is CH_2OH.

30. A compound in accordance with Claim 29 where **B** is $COOR_8$.

31. A compound of the formula



wherein R_2 is H or lower alkyl, R_4 is lower alkyl of 1 to 8 carbons and **B** is CH_2OH or $COOR_8$ where R_8 is H or ethyl.

32. A compound in accordance with Claim 31 where R_2 is H and R_4 is ethyl.

33. A compound in accordance with Claim 32 where **B** is CH_2OH.

34. A compound in accordance with Claim 33 where **B** is $COOR_8$.